

	CUMENTATION PAGE				Form Approved OMB No. 0704-0188	
AD-A199 708	:	16. RESTRICTIVE	MARKINGS			
•		3. DISTRIBUTION AVAILABILITY OF REPORT				
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE		APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED				
ES. SELECTION ON TOWN DOWN AND SEREDULE						
4. PERFORMING ORGANIZATION REPORT NUMBER(S) DODPOPTR/AYD88001		5. MONITORING ORGANIZATIO** REPORT NUMBER(\$)				
NAME OF PERFORMING ORGANIZATION 66. OFFICE SYMBOL		7a. NAME OF MONITORING ORGANIZATION				
Packaging Division	(If applicable) SMCAR-AEP					
6c. ADDRESS (City, State, and ZIP Code) US ARMY ARMAMENT RESEARCH, DE ENGINEERING CENTER PICATINNY ARSENAL, NJ 07806-5		76. ADDRESS (Ci	ty, State, a 4 ZIP Co	ode)		
86. NAME OF FUNDING/SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER				
8c. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF FUNDING NUMBERS				
		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.	
11. TITLE (Include Security Classification)						
Performance Oriented Packagin 12. PERSONAL AUTHOR(S) Ronald Prybylowski 13a. TYPE OF REPORT Final FROM	14. DATE OF REPORT (Year, Month, Day) 15. PAGE COUNT 88-8-24					
16. SUPPLEMENTARY NOTATION						
17. COSATI CODES 18. SUBJECT TERMS		Continue on reven	se if necessary a	ntify by b	lock number)	
FIELD GROUP SUB-GROUP	Performance	Oriented Pa	ckaging, POP,	Escapem	ent Assembly	
	=					
Performance Oriented Packaging design for the Escapement Assem	(POP) testing wallby F/M550 Fuze	as successfu	drops and	i on the stacking		
The POP marking, 4CI/Y22/Sxx have USA/DOD/AYD(xx	as been assigned k is the last tw			ckage)	DTIC	
₹ a/					SEP 1 5 1988	
20. DISTRIB'JTION/AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED SAME AS	21. ABSTRACT 5 UNCLASSI		ATION	Ε		
22a. NAME OF RESPONSIBLE INDIVIDUAL Ronald Prybylowski				22c. OFFICE SMCA	TYMBOL R-AEP	

DD Form 1473, JUN 86

Previous editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE

REPORT COVER

I REPORT NUMBER

II TITLE: Performance Oriented Packaging Testing of Escapement

Assembly for M550 Fuze

AUTHOR: Ronald Prybylowski

PERFORMING ACTIVITY: ARDEC

ADDRESS: Department of the Army

Armament Research, Development and Engineering Center HQ-US-Army Armament, Munitions and Chemical Command

Picatinny Arsenal, NJ 07805-5000

SMCAR-AEP

DATE August 1988

Approved for Public Release, Distribution Unlimited

Accession For	•				
NTIS GRA&I	À				
DTIC TAB	10				
Unannounced					
Justification					
Bv					
Distribution/					
Availability Codes					
Avail a	nd/or				
Tiut Specia	al				
1					
A-1					



1. DATA:

CONTAINER:

TYPE: Wood Box UN CODE: 4C1

NOMENCLATURE: Box, Wood

SPECIFICATION NUMBER: MIL-B-2427

DRAWING NUMBER: 12598465

MATERIAL: Wood

CAPACITY: 14 kgs (31 lbs)

DIMENSIONS: 18 1/8 X 14 5/16 X 9 11/16

TARE WEIGHT: 22kgs (47 lbs)

PRODUCT:

NAME: Escapement asembly for M550 Fuze

DRAWING NUMBER: 8886357 UNITED NATIONS NUMBER: n/a

UNITED NATIONS PACKING GROUP: II

PHYSICAL STATE: Solid AMOUNT PER CONTAINER: 1280

BACKGROUND:

The escapement assembly for the M550 fuze was provisional packed in a fiberboard box/barrier bag/wood box. Due to the success of the pack in protecting the assembly, a technical data package (TDP) was prepared to implement the pack as a permanent pack. As part of the TDP, a United Nations Performance Oriented Packaging (UN POP) marking is required. The following test plan was completed to obtain a UN POP marking for the pack.

3. TEST PLAN:

Testing was conducted in accordance with section 9.7 of "Transport of Dangerous Goods", third edition. Paragraph 9.7.3, Drop Test, and paragraph 9.7.6, Stacking Test, were the only tests required for this pack.

3a. Drop Test

Sample size: 5 boxes Temperature: Ambient

Drop Orientation (one box for each drop):

- 1. Bottom
- 2. Top
- 3. Long End
- 4. Short Side
- 5. A Corner

3b. Stacking Test

Due to the limited number of camples, the height of actual containers stacked on the bottom container was 1.5 meters instead of 3 meters, however, a weight equivalent to a 3 meter stack was placed on top to simulate.

4. RESULTS:

The boxes passed all tests. The contents of the containers were not discharged. The packs are considered safe for international cransportation in accordance with the United Nations Performance Oriented Packaging Regulations.

REFERENCE MATERIAL:

A: United Nations "Transport of Dangerous Goods", Third Edition

Page 1